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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/770,506

02/04/2004

Yoshihiko Iijima

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22850 7590 04/06/2007

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

NGUYEN, SON T

ART UNIT

PAPER NUMBER

3643

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
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3 MONTHS

04/06/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/06/2007.

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# Office Action Summary

Application No.

10/770,506

Applicant(s)

IJIMA ET AL.

Examiner

Son T. Nguyen

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 February 1970.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 18 and 23-52 is/are pending in the application.
- 4a) Of the above claim(s) 41-46 and 48-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18, 23-40, 47, 51 and 52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

SON T. NGUYEN  
PRIMARY EXAMINER

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 2/22/07.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 18,23-40,47,51-52** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to describe the added limitation of monomers. Upon reviewing the specification in detail, the Examiner could not find anywhere in the specification stating monomers or unpolymerized. Applicant states in his argument that "support for monomeric (i.e., unpolymerized) cinnamic acid monomers is found throughout the specification. Moreover, even though the term "monomer" may not appear in the disclosure, introduction of it into the claims does not introduce a new concept, since unpolymerized cinnamic acid monomers is disclosed and exemplified in the specification as filed." Despite what Applicant believes, adding monomer does introduce a new concept into the claims because the original claimed invention is just cinnamic acid monomers and nothing more. One of ordinary skill in the art reading Applicant's disclosure would not interpret the cinnamic acid monomers as a cinnamic acid monomers monomer because nothing in the specification indicates so for one to interpret such monomer or unpolymerized.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. **Claim 51** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim seems to be claiming a new composition instead of further defining or detailing the composition in claim 40, to which claim 51 depends. The percent weight and the cinnamic acid monomers have already been claimed in claim 40, therefore, it is unclear as to why Applicant is claiming these limitation again.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 18,23-26,28,47** are rejected under 35 U.S.C. 102(b) as being anticipated by Ferguson et al. (US 3157964).

For claim 18, Ferguson et al. teach a composition comprising cinnamic acid monomers monomers (col. 3, lines 3,9-10,25,29-32); an aqueous medium (col. 1, line 72, col. 7, line 66 and throughout patent), wherein said composition contains an amount of cinnamic acid monomers sufficient to regulate plant growth (the concentration as described by Ferguson throughout his patent for the cinnamic acid monomers is sufficient to regulate growth by supplying enough moisture, resistance to bacteria, etc. as listed in col. 1, lines 10-14,59-69).

For claim 23, Ferguson et al. teach water (col. 7, line 66).

For claim 24, Ferguson et al. teach the aqueous medium comprises water (col. 7, line 66) and an organic solvent such as alcohol (col. 6, line 64).

For claims 25-26, Ferguson et al. teach carboxymethylcellulose as a dispersant in the composition (col. 4, line 70).

For claim 28, Ferguson et al. teach a polymer as a dispersant (col. 2, under "The Polymeric Constituent").

For claim 47, Ferguson et al. teach a plant growth regulator comprising cinnamic acid monomers (col. 3, line 25).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 27** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al. as applied to claims 18,25 above, and further in view of Pierzynski et al. (6383128).

Ferguson is silent about employing a condensed phosphate as the preferred dispersant. Pierzynski et al. teach a condensed phosphate (col. 2, lines 12-13). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ condensed phosphate as taught by Pierzynski et al. as the preferred dispersant in Ferguson et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use ( for reducing the bioavailability of metal contaminants in soil) as a matter of obvious choice. In re Leshin, 125 USPQ 416.

9. **Claim 29-32** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al. as applied to claims 18,25 above, and further in view of Obrero et al. (4771571).

Ferguson et al. are silent about wherein said at least one dispersant comprises a non-ionic surfactant, an anionic surfactant, a cationic surfactant, or an amphoteric surfactant.

Obrero et al. teach in the same field of endeavor of plant treatment in which Obrero et al. employ a non-ionic surfactant, an anionic surfactant, a cationic surfactant, or an amphoteric

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surfactant (col. 2, lines 31-39) in order to inhibit the growth of microorganisms and to control microbial spoilage. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a non-ionic surfactant, an anionic surfactant, a cationic surfactant, or an amphoteric surfactant as taught by Obrero et al. in the composition of Ferguson et al. in order to inhibit the growth of microorganisms and to control microbial spoilage.

10. **Claims 33-40,51,52** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson et al. (as above).

For claim 33, Ferguson et al. teach a solubilizer but are silent about at least one solubilizer which increases the solubility of cinnamic acid monomers in an aqueous solution above 0.546 g/L. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add the solubilizer of Ferguson et al. in an amount which will increase the solubility of cinnamic acid in an aqueous solution above 0.546 g/L, since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable ranges until the desired effect (to make the composition more potent) is achieved involves only routine skill in the art. In re Aller, 105 USPQ 233.

For claims 34-35, Ferguson et al. are silent about the concentration of the cinnamic acid monomers being 25 weight % or less or above 0.546 g/L. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a concentration of the cinnamic acid monomers being 25 weight % or less or above 0.546 g/L in the composition of Ferguson et al., since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable value/ranges for the concentration of cinnamic acid monomers in the composition until the desired effect (to make the composition more potent) is achieved involves only routine skill in the art.

For claims 36-39, Ferguson et al. teach hydroxides (col. 5, lines 5-10).

For claims 40,51, Ferguson et al. teach a composition comprising cinnamic acid monomers, a solubilizer and an aqueous solvent, wherein the cinnamic acid monomers is dissolved in the aqueous solvent. However, Ferguson et al. are silent about 0.5 to 25 wt.% cinnamic acid monomers, 35 to 300 wt.% of a solubilizer, such as tripolyphosphate salt, based on the weight of the cinnamic acid monomers, and wherein the cinnamic acid monomers is dissolved in the aqueous solvent in an amount that exceeds the maximum amount of cinnamic acid monomers that can be dissolved in water at room temperature. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have 0.5 to 25 wt.% cinnamic acid monomers, 35 to 300 wt.% of a solubilizer based on the weight of the cinnamic acid monomers in the composition of Ferguson et al., since it has been held that where routine testing and general experimental conditions are present, discovering the optimum or workable value/ranges for the concentration of cinnamic acid monomers in the composition until the desired effect (to make the composition more potent) is achieved involves only routine skill in the art. In addition, It would have been obvious to one having ordinary skill in the art at the time the invention was made to select tripolyphosphate salt as the preferred solubilizer in the composition of Ferguson, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious choice. See *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) and *In re Leshin*, 125 USPQ 416. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to dissolve the cinnamic acid monomers in the aqueous solvent in an amount that exceeds the maximum amount of cinnamic acid monomers that can be dissolved in water at room temperature in the composition of Ferguson et al., since it has been held that where routine testing and general experimental

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conditions are present, discovering the optimum or workable value/ranges for the concentration of cinnamic acid monomers in the composition until the desired effect is achieved involves only routine skill in the art.

For claim 52, Ferguson is silent about the monomeric cinnamic acid having an average diameter of 0.3  $\mu\text{m}$  or less. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a cinnamic acid monomer that is in particle form with an average diameter of 0.3  $\mu\text{m}$  or less in the composition of Ferguson, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use (easier to dissolve) as a matter of obvious choice. See *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) and *In re Leshin*, 125 USPQ 416.

### ***Response to Arguments***

11. Applicant's arguments filed 2/20/07 have been fully considered but they are not persuasive.

**Applicant argued that Ferguson does not anticipate the present claims, because it is directed to compositions for supplying moisture to plants which may optionally contain an addition polymer containing cinnamic acid (in copolymerized form). The copolymerized cinnamic acid of the prior art has lost its identity in the copolymer and is quite distinct from the non-polymerized cinnamic acid of the present claims.**

The claim calls for cinnamic acid with no indication as to whether it is polymerized or non-polymerized cinnamic acid, therefore, Ferguson et al. anticipate in teaching cinnamic acid which can be added to the composition. Optional or not, cinnamic acid can be added to the composition, therefore, Ferguson et al. anticipate in the claim language. In addition, Ferguson



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et al. do teach monomeric cinnamic acid in col. 3, lines 9-10,25,29-32. Note that the copolymer cinnamic acid is preferred but not necessary.

**Applicant argued that Pierzynski and Obrero et al. do not disclose cinnamic acid monomers.**

Pierzynski and Obrero et al. were not relied on for a teaching of cinnamic acid monomers, therefore, it is irrelevant if they teach it or not. See the above rejection for the teachings relied on for Pierzynski and Obrero et al.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Nguyen whose telephone number is 571-272-6889. The examiner can normally be reached on Mon-Thu from 10:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Son T. Nguyen'.

Son T Nguyen  
Primary Examiner  
AU 3643